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OCCUPATIONAL SURVEY REPORT

AIRBORNE BATTLE MANAGEMENT
SYSTEMS

AFSC 1A4X1

OSSN 2316

OCTOBER 1998

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION AND TRAINING COMMAND
1550 5TH STREET EAST
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PREFACE

This report presents the results of an Air Force Occupational Survey of the Airborne Battle Management Systems career ladder, Air Force Specialty Code (AFSC) 1A4X1. Authority for conducting occupational surveys is contained in AFI 36-2623. Copies of this report and pertinent computer printouts are distributed to the Air Force Functional Manager, the technical training location, all major using commands, and other interested operations and training officials.

The survey instrument was developed by Mr. Michael F. Brosnan, Inventory Development Specialist, with computer programming support furnished by Ms. Karen B. Tilghman and administrative support provided by Mr. Richard G. Ramos. First Lieutenant Charlie L. Law, Occupational Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved Lieutenant Colonel Roger W. Barnes, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

Additional copies of this report can be obtained by writing to AFOMS/OMYXI, 1550 5th Street East, Randolph Air Force Base Texas 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our web site at <http://www.omsq.af.mil>.

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SUMMARY OF RESULTS

1. **Survey Coverage**: The Airborne Battle Management Systems career ladder was surveyed to obtain current job and task data for use in examining training programs. Survey results are based on responses from 397 respondents. This represents 52 percent of all assigned AFSC 1A4X1 personnel.
2. **Specialty Jobs**: Five jobs were identified in the career ladder structure analysis. The five jobs were: Air Surveillance, Weapons Directors, Air Operations, Communications Technician, and Instructors. These jobs represent over 96 percent of the personnel in the survey sample.
3. **Career Ladder Progression**: Personnel in the Airborne Battle Management Systems career ladder have a very atypical career ladder progression. Technical tasks performed by 3-skill level personnel are also performed by a large percentage of 5- and 7-skill level personnel. Personnel at each skill level are spending most of their time performing general operating or simulator activities. The major difference between the skill-levels is the inclusion of a minimal amount of supervisory tasks up to and including the 7-skill level. Only at the 9- and CEM-skill levels are personnel working primarily as supervisors and managers.
4. **Job Satisfaction Analysis**: The majority of job satisfaction measures for the AFSC 1A4X1 were low. Incumbents are generally much less satisfied than the previous survey personnel. Job satisfaction indicators are also fairly low throughout most of the specialty jobs identified. The job with the highest overall job satisfaction is the Weapons Directors Job, while the job with the lowest job satisfaction is the Air Operations Job.
5. **Training Analysis**: The current Specialty Training Standard is well supported by survey data. There were no line items that were unsupported; however, there were several tasks identified which are not currently being taught in the AFSC-awarding courses and may be considered for inclusion in future training courses.
6. **Implications**: The current AFSC 1A4X1 career ladder structure reflects an atypical job progression. Five jobs were identified in the career ladder. Overall, job satisfaction is fairly low, with low reenlistment intentions for first-enlistment personnel. The STS is well supported, without any unsupported line items.

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**OCCUPATIONAL SURVEY REPORT (OSR)
AIRBORNE BATTLE MANAGEMENT SYSTEMS
(AFSC 1A4X1)**

INTRODUCTION

This is a report of an occupational survey of the Airborne Battle Management Systems career ladder, completed by the Occupational Analysis Flight, Air Force Occupational Measurement Squadron. This survey was conducted to understand what is currently being done by AFSC 1A4X1 personnel to ensure members are receiving training for the correct equipment, to validate training requirements, and to verify changes within the career ladder, technical training, and career development course materials. The last occupational survey for this career ladder was published in April 1994.

Background

As described in the AFMAN 36-2108 *Specialty Description*, dated 31 October 1997, members of the Airborne Battle Management Systems career ladder operate, evaluate, and manage Airborne Battle Management Systems radar sensors and electronic attack equipment. Members also interpret computer-generated displays. Members gather, record, display, and distribute mission information. In addition, they maintain communications nets with ground, air, and maritime units, and provide radar control of air weapons and identify airborne objects.

All members entering the career ladder are required to attend the E3ABR1A431-000 Airborne Battle Management Systems Operator Course. The course, offered at Keesler AFB MS, is 12 weeks long. This course provides apprentice-level training in fundamental subject areas common to either Airborne Battlefield Command and Control Center, Airborne Warning and Control System, or Joint Surveillance Target Attack Radar System.

Entry into the career ladder currently requires an Armed Forces Vocational Aptitude Battery minimum score of General 53, and a strength factor of "G" (weight lift of 40 lbs).

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SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) OSSN 2316, dated October 1997. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 39 subject-matter experts (SMEs) at the following locations:

<u>BASE</u>	<u>UNIT VISITED</u>
Keesler AFB MS	335 TRS
Tyndall AFB FL	325 TRS
Robins AFB GA	12 ACCS
Tinker AFB OK	522 OG
Davis-Monthan AFB AZ	42 ACCS

The resulting JI contained a comprehensive listing of 490 tasks grouped under 10 duty headings and a background section requesting such information as grade, duty title, functional area, types of equipment operated, job satisfaction, and forms used.

Survey Administration

From July 1997 through May 1998, Base Training Offices at operational bases worldwide administered the inventory to all eligible AFSC 1A4X1 members. Members eligible for this survey consisted of the total assigned 3-, 5-, and 7-skill levels, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring during the time the JIs were administered to the field; and (4) personnel in their job less than 6 weeks. Job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Respondents were asked to complete an identification and biographical information section first and go through the booklet and check each task performed in their current job. After checking all tasks performed, respondents then rated each of these tasks on a 9-point scale

showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount spent).

To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of their time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

Survey Sample

Personnel were selected to participate in this survey so as to ensure an accurate representation across MAJCOMs and paygrades. Table 1 reflects the MAJCOM distribution of assigned and sampled AFSC 1A4X1 personnel. Table 2 reflects the distribution by paygrade. Survey results are based on responses from 397 AFSC 1A4X1 personnel (52 percent of the assigned population). As shown by these tables, the survey sample is representative of the total AFSC 1A4X1 population.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. While most participants in the survey process completed a USAF JI, selected senior AFSC 1A4X1 personnel were also asked to complete booklets providing judgments on task training emphasis (TE) or task difficulty (TD). The information gained from task factor data is used in various analyses and is a valuable part of the training decision process.

Training Emphasis (TE). TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 39 senior NCOs from the career ladder who completed a TE booklet were asked to select tasks they felt required some structured training for entry-level personnel and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 10 (extremely high emphasis). Structured training is defined as training provided at resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. There was very good agreement among the 39 raters as to which tasks require some form of structured training and which do not. The average TE rating for personnel without a "D" shred was 1.99, with a standard deviation of 1.59. Any task with a TE rating of 3.58 or above is considered to have high training emphasis.

TABLE 1
MAJCOM REPRESENTATION OF AFSC 1A4X1 SAMPLE

<u>MAJOR COMMAND</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
ACC	80	77
AETC	1	1
EUR	8	5
PACAF	11	17
OTHER**	<1	0
 TOTAL ASSIGNED	 762	
TOTAL SURVEYED***	730	
TOTAL IN SURVEY SAMPLE	396	
PERCENT OF ASSIGNED IN SAMPLE	52%	
PERCENT OF SURVEYED IN SAMPLE	54%	

* Assigned strength as of December 1997

** Other includes: AFSPC, HQ US, and NORAD

*** Excludes personnel in PCS, student, or hospital status, or less than 6 weeks on the job

TABLE 2
PAYGRADE DISTRIBUTION

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
E-1 to E-3	21	14
E-4	27	32
E-5	30	32
E-6	12	12
E-7	7	8
E-8	2	2
E-9	1	1

* Assigned strength as of December 1997

NOTE: Columns may not add to 100 percent due to
rounding

Task Difficulty (TD). TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 34 senior NCOs who completed TD booklets were asked to rate the difficulty of each task using a 10-point scale (i.e., extremely low to extremely high). Ratings were standardized so tasks have an average difficulty of 5.00, with a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting Air Force Specialty entry-level jobs.

SPECIALTY JOBS (Career Ladder Structure)

The occupational analysis process begins with an examination of the career ladder structure. The structure of jobs within the Airborne Battle Management Systems career ladder was examined on the basis of similarity of tasks performed and the relative percent of time spent ratings provided by job incumbents, independent of other specialty background factors.

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by respondents. The Comprehensive Occupational Data Analysis Program (CODAP) assists by creating an individual job description for each respondent based on the tasks performed and the relative amount of time spent on tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, new members are added to this initial group, or new groups are formed based on the similarity of tasks and time spent ratings.

The basic group used in this hierarchical clustering process is the *Job*. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a *Cluster*. The structure of the career ladder is then defined in terms of jobs and clusters of jobs. The resulting job structure information can be used to evaluate the accuracy of career ladder documents (i.e., AFMAN 36-2108, *Airman Classification*, the Career Field Education and Training Plan and Specialty Training Standards (STS), as well as to gain a better understanding of current utilization patterns. The above terminology will be used in the discussion of the AFSC 1A4X1 career ladder structure.

Overview of Specialty Jobs

The analysis procedure described above identified five jobs within the AFSC 1A4X1 survey sample. The division of jobs performed is illustrated in Figure 1, and a listing of these jobs is provided below. The stage (STG) number shown beside each title references computer printed information; the letter "N" represents the number of personnel in each group.

- I. AIR SURVEILLANCE JOB (STG018, N=235)
- II. WEAPONS DIRECTOR JOB (STG023, N=118)
- III. AIR OPERATIONS JOB (STG020, N=9)
- IV. COMMUNICATIONS TECHNICIAN JOB (STG037, N=10)
- V. INSTRUCTORS JOB (STG017, N=5)

The respondents forming these jobs account for 95 percent of the survey sample. The remaining 4 percent were performing tasks or series of tasks which did not group with any of the defined jobs. Some job titles for these individuals include building manager and squadron superintendent.

Group Descriptions

The following paragraphs contain brief descriptions of the jobs identified through the career ladder structure analysis. Table 3 presents the relative time spent on duties by members of these specialty jobs, while Table 4 provides demographic information for each job discussed within this report. Representative tasks for all the groups are contained in Appendix A.

I. AIR SURVEILLANCE JOB (STG018). The 235 members of this job compromise the core job of the AFSC 1A4X1 career ladder. They represent 60 percent of the survey sample. Personnel in this job are responsible for monitoring aircraft in a theater of operations. Personnel in the Air Surveillance Job spend 35 percent of their time performing general operating or simulator activities. Personnel also spend 27 percent of their job time performing surveillance activities. This high percentage of time spent performing surveillance activities is much higher than any other job identified. The members of this job perform an average of 126 tasks, which is about average when compared to the other jobs. Members of this job are distinguished by the time they spend on the following tasks:

AFSC 1A4X1 CAREER LADDER JOBS

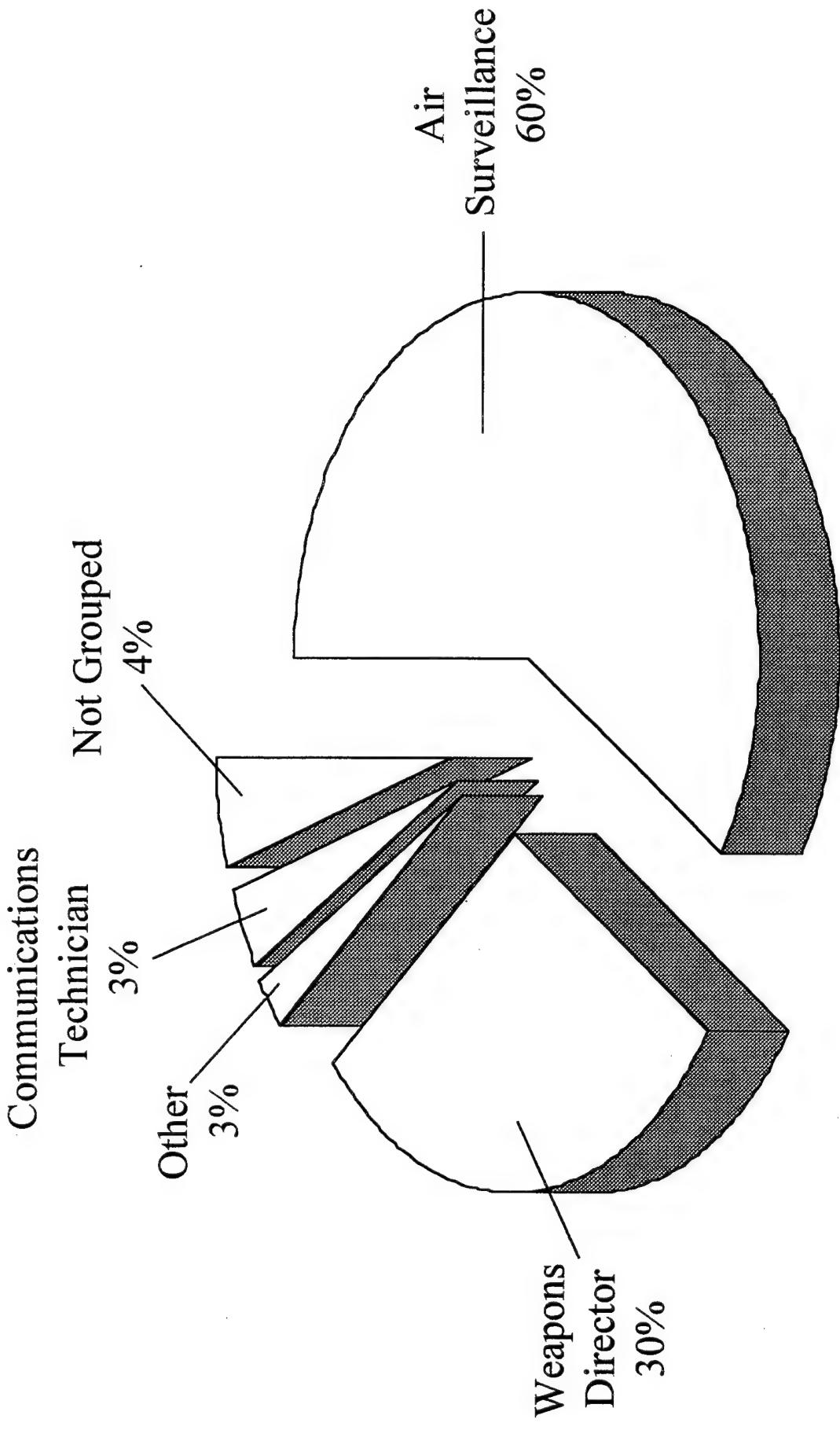


FIGURE 1

TABLE 3

RELATIVE PERCENT TIME SPENT PERFORMING DUTIES BY SPECIALTY JOBS FOR AFSC 1A4X1

DUTIES	AIR SURVEILLANCE (STG018) (N=235)	WEAPONS DIRECTORS (STG023) (N=118)	AIR OPERATIONS (STG020) (N=9)	COMMUNICATION TECHNICIAN (STG037) (N=10)	INSTRUCTORS (STG017) (N=5)
A PERFORMING COMMON AIRCREW ACTIVITIES	20	11	43	14	2
B PERFORMING GENERAL OPERATING OR SIMULATOR ACTIVITIES	35	29	35	25	2
C PERFORMING WEAPONS DIRECTOR (WD) ACTIVITIES	1	33	2	2	-
D PERFORMING SURVEILLANCE ACTIVITIES	27	2	-	2	-
E PERFORMING COMMUNICATIONS AND COMMAND AND CONTROL ACTIVITIES	3	12	12	25	-
F PERFORMING ELECTRONIC WARFARE (EW) ACTIVITIES	3	2	3	3	-
G PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	5	6	1	21	27
H PERFORMING TRAINING ACTIVITIES	3	3	1	2	57
I PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER SYSTEM ACTIVITIES	2	2	3	7	8
J PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1	*	-	*	4

* Denotes less than 1 percent

TABLE 4

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS FOR AFSC 1A4X1

	AIR SURVEILLANCE (STG18)	WEAPONS DIRECTOR (STG23)	AIR OPERATIONS (STG20)	COMMUNICATIONS TECHNICIAN (STG37)	INSTRUCTORS (STG17)
NUMBER IN GROUP	235	118	9	10	5
PERCENT OF SAMPLE	60%	30%	2%	3%	1%
PERCENT IN CONUS	23%	19%	0%	30%	0%
DAFSC DISTRIBUTION:					
1A431	28%	0%	0%	0%	0%
1A451	57%	17%	100%	30%	80%
1A451D	0%	48%	0%	0%	0%
1A471	13%	9%	0%	50%	20%
1A471D	0%	24%	0%	0%	0%
1A491/00	2%	2%	0%	20%	0%
PAYGRADE DISTRIBUTION					
E-1 to E-3	19%	1%	67%	0%	0%
E-4	44%	15%	33%	0%	20%
E-5	23%	55%	0%	20%	40%
E-6	9%	19%	0%	20%	20%
E-7	4%	8%	0%	30%	20%
E-8	1%	0%	0%	10%	0%
E-9	1%	1%	0%	20%	0%
PERCENT SUPERVISING	32%	53%	11%	70%	20%
AVERAGE NUMBER OF TASKS PERFORMED	126	188	42	130	27

* Denotes less than 1 percent

- inspect personal professional equipment
- evaluate track data
- identify emergency symbols or codes
- maintain crew coordination
- maintain flight manuals, safety or operational supplements, or flight crew checklists
- respond to computer alarms or alerts
- perform airborne warning and control systems (AWACS) monitor procedures
- identify radar data

Fifty-seven percent of the personnel in this job hold the 5-skill level. Forty-four percent are in paygrade E-4, while 23 percent are in paygrade E-5. Thirty-two percent report having supervisory responsibilities.

II. WEAPONS DIRECTOR JOB (STG023). Comprising 30 percent of the survey sample, this job includes 118 members who are responsible for Weapons Director-related duties. While members in this job still spend 29 percent of their time performing general operating or simulator activities, their main job focus is on weapons director activities (see Table 3). Personnel in this job spend 33 percent of their time performing weapons director activities. This high percentage is much higher than any other job. There are not any 3-skill level personnel in this job, which is expected since personnel move into the "D" shred at the 5-skill level. Likewise, there are no personnel under 48 months TAFMS in this job for the same reason. Personnel in this job perform an average of 188 tasks, the highest of all jobs identified. Some of the tasks which distinguish this cluster are:

- hand off aircraft to other controlling agencies
- direct aircraft flow to assigned targets, tankers, or airspace
- direct aircraft to terminate missions or return to bases
- accept control of aircraft from other control agencies
- control aircraft at orbit points, such as strategic orbit points (STOPs), combat air patrol (CAP) points, or initial points (IPs)
- deconflict aircraft with respect to routes, altitudes, or headings
- request aircraft status information, such as fuel or fire control information

Personnel in this job are primarily "D" shred personnel. The predominant skill level for this job was the 5-skill level with 48 percent of the personnel. Additionally, 24 percent of the personnel in this job are in the 7-skill level. The majority of the personnel in the Weapons Director Job are in paygrades E-5 and E-6. Fifty-three percent of the personnel in this job report supervising others, the second highest among all jobs.

III. AIR OPERATIONS JOB (STG020). The nine members in this job are tasked with duties that typically are performed by aircrew members. This job represents only 2 percent of the survey sample. Members in this job are responsible for a variety of tasks, including operating galley equipment, identifying and disposing of foreign object damage, and performing preflight activities. Forty-three percent of their time is spent performing common aircrew activities, which is higher than any other job. Additionally, personnel in the Air Operations Job spend 35 percent of their time performing general operating or simulator activities. An average of 42 tasks is performed by personnel in this job, which is the second lowest when compared to the other jobs. This low number indicates the job is fairly specialized with personnel performing tasks primarily concerned with basic air operations and aircrew activities. Tasks that distinguish this cluster include:

- maintain flight manuals, safety or operational supplements, or flight crew checklists
- review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)
- secure equipment for takeoffs or landings
- maintain crew coordination
- maintain tactical situation awareness
- update battle staff displays
- preflight life support equipment

All of the personnel in this job are at the 5-skill level. Sixty-seven percent are in paygrades E-1 to E-3. Only 11 percent of the personnel in the Air Operations Job report supervising others.

IV. COMMUNICATIONS TECHNICIAN JOB (STG037). The 10 members of this job make up 3 percent of the survey sample. Members of this job primarily work with communications systems. Typical tasks performed by personnel in the Communication Technician Job include: encoding and decoding messages, using the radio for various activities, and broadcasting encrypted messages. The majority of the communication tasks in this job are tasks concerning secure communication, which might explain the higher skill-level personnel in this job. Twenty-five percent of their time is spent performing communications and command and control activities, which is higher than any other job group. Personnel in this job also spend 21 percent of their time performing management and supervisory activities, which is second only to the Instructor Job. An average of 130 tasks is performed, which is the about average when compared to other jobs. Most of those tasks are very specialized to either communications tasks or supervisory tasks. Tasks which are representative of the job are:

- encode or decode messages
- determine or load cryptological key requirements
- receive or maintain PLC encrypted EAMs
- perform secure radio procedures
- perform communications checks
- identify and report communications malfunctions
- monitor assigned communications nets
- determine mission communications requirements
- perform radio/telephone (R/T) procedures

The personnel in the Communications Technician Job are more senior personnel, with 70 percent at either the 7- or 9/CEM-skill levels. Personnel in this job all are in paygrades E-5 or higher. Seventy percent report supervising other personnel, which is the highest of any job group.

V. INSTRUCTORS JOB (STG017). The 5 members of this job represent 1 percent of the survey sample. This job was the smallest job identified. Members of this job are responsible for the formal training of job incumbents. Personnel spend 57 percent of their time performing training activities, which is much higher than any other job. Members of this job also spend 27 percent of their time performing management and supervisory activities, which is also higher than any other job. Members of this cluster performed an average of only 27 tasks. This is the lowest amount of tasks performed by any of the job groups. This low number suggests the job is very specialized, with members performing almost exclusively instructor-related tasks. Representative tasks performed by members of this cluster include:

- inspect training materials or aids for operation or suitability
- develop training materials or aids
- develop performance tests
- write test questions
- administer or score tests
- conduct formal course classroom training
- counsel trainees on training progress
- evaluate progress of trainees
- establish or maintain study reference files

Eighty percent of the members in the Instructors Job are at the 5-skill level, while the other 20 percent are at the 7-skill level. Forty percent of the personnel in this job are at the paygrade E-5. Only 20 percent report supervising other personnel.

Comparison of Current Jobs to Previous Survey Findings

The previous OSR, completed in April 1994, surveyed both the 1A4X1 career ladder and the 13B3 career field. The 13B3 career field was an officer career field, which included the weapons directors' aspect of the career field. Since the previous study, the officer slots have been converted to enlisted slots, comprising the "D" shred in the current career ladder.

The comparison between the current specialty jobs and the specialty jobs found in the 1994 survey is displayed in Table 5. Two clusters were identified in the previous study, Air Surveillance and Command and Control. The Air Surveillance Job in the current study is very comparable to the Air Surveillance Cluster in the previous study. The main difference is that the previous study broke out the job by the experience personnel had in the job. The Command and Control Cluster previously found was not identified in the current study, although the Weapons Director aspect of that cluster is comparable to the current Weapons Director Job. Likewise, the Airborne Aircraft Control aspect of that cluster is very similar to the Communications Technician Job found in the current study. Both the Air Operations and Instructors jobs identified in the current study were not found in the previous study.

Summary

Utilizing the special job-identifying techniques described at the beginning of this section, five jobs were identified in the career ladder structure analysis. The five jobs were directly involved in performing the full range of duties and responsibilities of the Airborne Battle Management Systems career ladder.

The core job was the Air Surveillance Job, with 60 percent of the personnel in the sample. The Weapons Director Job makes up 30 percent of the sample, and is now being performed by enlisted personnel with more than 48 months TAFMS, rather than being an officer AFSC. Current results largely follow the historical career structure with the major changes involving the conversion of the Weapons Director Job from an officer AFSC to an enlisted AFSC.

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as the AFMAN 36-2108 *Airman Classification*, and the STS, reflect what career ladder personnel are actually doing in the field.

TABLE 5

SPECIALTY JOB COMPARISON BETWEEN CURRENT AND 1994 SURVEY

CURRENT SURVEY (N=396)

AIR SURVEILLANCE JOB

Not identified
Not identified
Not identified

Not identified

COMMUNICATION TECHNICIAN
Not Identified
WEAPONS DIRECTOR JOB

AIR OPERATIONS JOB

INSTRUCTORS

1995 SURVEY (N=254)

AIR SURVEILLANCE CLUSTER

-Entry Level Air Surveillance
-Air Surveillance
-Advanced Air Surveillance

COMMAND AND CONTROL CLUSTER

-Airborne Aircraft Control
-Senior Aircraft Control
-Air Weapons Director

Not Identified

Not Identified

The distribution of skill-level groups across the specialty jobs is displayed in Table 6, while Table 7 offers another perspective by displaying the average percent time spent on each duty across the skill-level groups. The 3-, 5-, and 7-skill level groups all perform mostly technical duties, with 7-skill level personnel also performing minimal supervisory and training duties. Supervisory duties are not generally performed until personnel reach the 9- and CEM-skill level (see Table 7, Duty G). This indicates a career ladder with a high level of technical task performance for all personnel, up to and including 7-skill level personnel.

Skill-Level Descriptions

DAFSC 1A431. The 69 airmen at the 3-skill level (representing 17 percent of the survey sample) perform an average of 96 tasks. This low number is expected because the personnel are primarily in their first enlistment and doing a small number of technical tasks. Ninety-six percent of the 3-skill level is grouped into the Air Surveillance Job (Table 6). Table 7 shows the average percent time spent performing duties by skill level. As shown in Table 7, 35 percent of the respondents' time is spent performing general operating or simulator activities. Additionally, 28 percent of their time is spent performing surveillance activities, while 25 percent of their time is used to perform common aircrew activities. Their job focus is shown in Table 8, which lists representative tasks performed by the 3-skill level incumbents. Most tasks listed relate to Duties A (Performing Common Aircrew Activities) and D (Performing Surveillance Activities), respectively. Very few respondents reported performing higher level duties, such as supervisory duties or training activities.

DAFSC 1A451. The 173 airmen in the 5-skill level (44 percent of the survey sample) without a "D" shred perform an average of 123 tasks. Personnel are doing more tasks as they get more proficient in the tasks they learn at the 3-skill level. As Table 6 demonstrates, similar to the 3-skill level personnel, the largest percentages of 5-skill level incumbents work in Air Surveillance Job (77 percent). Unlike the 3-skill level, however, 12 percent of the 5-skill level are also in the Weapons Directors Job. This indicates that personnel are performing Weapons Directors tasks, but are not part of the "D" shred. As shown in Table 7, 32 percent of the respondents' time is spent performing general operating or simulator activities. Twenty-two percent of their time is spent performing surveillance activities, while 21 percent of their time is spent performing common aircrew activities. Although personnel at the 5-skill level are performing more supervisory and training activities than the 3-skill level, only 11 percent of their time is spent performing these duties. Table 9 shows the representative tasks for the 5-skill level personnel. This table indicates that the 5-skill level members are performing a wide variety of tasks with an emphasis on performing common aircrew tasks, and performing general operating or simulator tasks, which is expected at this level. Personnel at this level are performing mostly technical tasks, such as performing authentication procedures and preflight life support equipment. Table 10 shows those tasks which best differentiate the 3- and 5-skill levels. As expected, the main difference is the slight emphasis on supervisory and training tasks at the 5-skill level.

TABLE 6

DISTRIBUTION OF AFSC 1A4X1 MEMBERS ACROSS SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

SPECIALTY JOBS	DAFSC 1A431 (N=69)	DAFSC 1A451 (N=173)	DAFSC 1A451D (N=59)	DAFSC 1A471 (N=56)	DAFSC 1A471D (N=30)	DAFSC 1A491/00 (N=9)
	96	77	0	54	3	56
I Air Surveillance	0	12	97	20	93	11
II Weapons Directors	0	5	0	0	0	0
III Air Operations	0	2	0	9	0	22
IV Communications Technician	0	2	0	2	0	0
V Instructors	4	2	3	15	4	1
Not Grouped						

TABLE 7

AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY DAFSC 1A4X1 GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES	DAFSC 1A431 (N=69)	DAFSC 1A451 (N=173)	DAFSC 1A451D (N=59)	DAFSC 1A471 (N=56)	DAFSC 1A471D (N=30)	DAFSC 1A491/00 (N=9)
A PERFORMING COMMON AIRCREW ACTIVITIES	25	21	13	13	11	13
B PERFORMING GENERAL OPERATING OR SIMULATOR ACTIVITIES	35	32	29	31	25	29
C PERFORMING WEAPONS DIRECTOR (WD) ACTIVITIES	1	3	39	5	30	4
D PERFORMING SURVEILLANCE ACTIVITIES	28	22	3	13	3	7
E PERFORMING COMMUNICATIONS AND COMMAND AND CONTROL ACTIVITIES	3	5	9	10	10	9
F PERFORMING ELECTRONIC WARFARE (EW) ACTIVITIES	4	3	1	2	2	1
G PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	2	6	3	15	11	33
H PERFORMING TRAINING ACTIVITIES	*	5	2	5	4	4
I PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER SYSTEM ACTIVITIES	2	2	1	5	3	2
J PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	*	1	*	1	*	*

* Denotes less than 1 percent

NOTE: Columns may not add up to 100 percent due to rounding

TABLE 8
REPRESENTATIVE TASKS PERFORMED BY 1A431 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=69)
A20 Order or pickup aircrew flight lunches	94
A36 Pick up or turn in support items, such as coffee or water jugs	94
A19 Operate galley equipment, such as ovens or coffeemakers	93
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	91
A9 Fire small arms for qualification	91
B117 Perform airborne warning and control systems (AWACS) monitor procedures	90
D270 Perform voice tell procedures	90
D250 Identify emergency symbols or codes	90
A6 Don or doff aircrew chemical warfare ensemble	90
D247 Identify aircraft using IFF/SIF procedures	88
D228 Assist in determining or determine track classifications or identifications	88
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	87
D231 Complete correlation checks with air tracks	87
B90 Evaluate track data	86
A12 Inspect personal professional equipment	86
A21 Participate in combat survival training	86
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	84
D268 Perform passive tracking	84
D263 Monitor passive tracking	84
D239 Detect targets and initiate track symbology on present position of data	83
B44 Accept assigned tracks	83
D251 Identify radar data	83
B132 Record track activities	83
D261 Maintain track logs	83
D260 Maintain track continuity	81
B134 Respond to computer alarms or alerts	81
D248 Identify aircraft using methods other than IFF/SIF procedures	81
A25 Participate in premission intelligence briefings	81
A7 Don or doff aircrew protective clothing, such as antiexposure suits	81
A10 Identify or dispose of foreign object damage (FOD)	80
B105 Maintain tactical situation awareness	78
B104 Maintain crew coordination	78
B118 Perform authentication procedures	78
D255 Interrogate tracks for IFF/SIF responses	77
A14 Load crew gear or personal equipment on aircraft	77
D225 Analyze jamming information provided by radar data quality or radar maintenance personnel	77

Average number of tasks performed - 96

TABLE 9
REPRESENTATIVE TASKS PERFORMED BY 1A451 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=173)
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	94
A19 Operate galley equipment, such as ovens or coffeemakers	94
A9 Fire small arms for qualification	92
A12 Inspect personal professional equipment	92
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	90
A6 Don or doff aircrew chemical warfare ensemble	90
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	90
B104 Maintain crew coordination	88
A7 Don or doff aircrew protective clothing, such as antiexposure suits	86
B118 Perform authentication procedures	85
A37 Preflight life support equipment	84
A42 Secure equipment for takeoffs or landings	84
A10 Identify or dispose of foreign object damage (FOD)	84
A8 Don or doff ground crew chemical warfare ensemble	82
A14 Load crew gear or personal equipment on aircraft	81
A20 Order or pickup aircrew flight lunches	80
A25 Participate in premission intelligence briefings	80
B134 Respond to computer alarms or alerts	79
B72 Conduct radio checks with ground or airborne agencies	79
B105 Maintain tactical situation awareness	77
A36 Pick up or turn in support items, such as coffee or water jugs	77
A34 Perform or practice emergency aircraft egress procedures	75
B90 Evaluate track data	75
B117 Perform airborne warning and control systems (AWACS) monitor procedures	74
B76 Configure data bases	74
D250 Identify emergency symbols or codes	73
A32 Perform procedures in altitude chambers	73
D228 Assist in determining or determine track classifications or identifications	72
B98 Interpret mission systems console displays	72
D254 Interpret IFF/SIF computer-generated returns for identifying air or surface tracks	72
D247 Identify aircraft using IFF/SIF procedures	71
D260 Maintain track continuity	71
D251 Identify radar data	71
A2 Assist in flight deck procedures, such as traffic avoidance	71
A40 Report mission equipment discrepancies or malfunctions to operational supervisors or aircraft commanders	71

Average number of tasks performed - 123

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 1A431 AND DAFSC 1A451 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 1A431 (N= 69)			DAFSC 1A451 (N=173)			DIFF
	DAFSC 1A431 (N= 69)	DAFSC 1A451 (N=173)	DIFF	DAFSC 1A431 (N= 69)	DAFSC 1A451 (N=173)	DIFF	
D270 Perform voice tell procedures	90	68	22				
D231 Complete correlation checks with air tracks	87	65	22				
G384 Evaluate personnel for compliance with performance standards	1	34	-33				
G349 Conduct supervisory performance feedback sessions	0	32	-32				
H427 Counsel trainees on training progress	1	33	-32				
G413 Supervise military personnel	1	33	-32				
G353 Counsel subordinates concerning personal matters	1	32	-31				
H440 Maintain training records or files	1	30	-29				
H438 Evaluate progress of trainees	1	29	-28				
G416 Write performance reports or supervisory appraisals	1	27	-26				
H426 Conduct training conferences, briefings, or debriefings	4	30	-26				
H428 Determine training requirements	1	26	-25				
G418 Write recommendations for awards or decorations	0	24	-24				
H425 Conduct OJT	3	27	-24				
H434 Evaluate personnel to determine training needs	3	27	-24				
G396 Inspect personnel for compliance with military standards	3	27	-24				
G397 Interpret policies, directives, or procedures for subordinates	0	23	-23				
G400 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	10	33	-23				
H441 Personalize lesson plans	0	23	-23				
G374 Establish performance standards for subordinates	0	22	-22				
A42 Secure equipment for takeoffs or landings	62	84	-22				
BL29 Provide air or ground simulated targets for crew training	6	27	-21				
BL11 Monitor ground station status	14	35	-21				

DAFSC 1A451D. The 59 airmen in the 5-skill level (15 percent of the survey sample) with a "D" shred perform an average of 173 tasks. Personnel are performing more tasks as they take on not only similar tasks performed by the 5-skill level personnel outside the shred, but also are performing Weapons Directors tasks. As Table 6 demonstrates, the members of the 5-skill level in the "D" shred are almost exclusively found in the Weapons Directors Job. Ninety-seven percent are in the Weapons Director Job, with the other 3 percent not grouped. As shown in Table 7, 39 percent of the respondents' time is spent performing Weapons Director activities. This high percentage is higher than any other skill level group. However, personnel in the "D" shred do not perform only Weapons Director duties. Similar to the other skill level groups, 29 percent of their time is spent performing general operating or simulator activities. However, unlike the 5-skill level personnel without "D" shred, only 13 percent of their time is spent performing common aircrew activities, and only 3 percent of their time is spent performing surveillance activities. Table 13 shows the time spent on tasks for the 5-skill level personnel. This table indicates that the "D" shred personnel at the 5-skill level are performing a variety of tasks with an emphasis on Weapons Directors' tasks, which is expected.

DAFSC 1A471. The 56 NCOs in the 7-skill level (14 percent of the survey sample) who do not carry a "D" shred perform an average of 151 tasks. As Table 6 demonstrates, unlike their junior counterparts at the 3- and 5-skill levels, only 54 percent of 7-skill level personnel are in the Air Surveillance Job. Nine percent of the 7-skill level are in the Communications Technician Job, while 2 percent are in the Instructor Job. Similar to the 5-skill level, 20 percent of the 7-skill level personnel are performing Weapons Directors tasks, yet do not carry a "D" shred. Both of these jobs are more supervisory in nature. As Table 7 shows, 31 percent of their time is spent performing general operating or simulator activities, which is consistent with the lower skill-level groups. However, 15 percent of their time is spent performing management and supervisory activities, and 5 percent is spent performing training activities. Table 11 lists the most common tasks performed by 7-skill level personnel. While some tasks performed by the 7-skill level are more supervisory in nature, the majority of tasks performed at this skill level are still technical, hands-on tasks. Table 12 shows those tasks which best differentiate the 5- and 7-skill levels. As expected, key differences at the 7-skill level are greater emphasis on supervision and administration.

DAFSC 1A471D. The 30 NCOs in the 7-skill level (8 percent of the survey sample) with a "D" shred perform an average of 208 tasks. As Table 6 demonstrates, 93 percent of the "D" shred personnel are in the Weapons Director Job, with 3 percent in the Air Surveillance Job, and 4 percent not grouped. As Table 7 shows, 30 percent of their time is spent performing Weapons Director activities, which is expected. Additionally, 25 percent of their time is spent performing general operating or simulator activities. Unlike personnel in the 7-skill level that do not carry the "D" shred, these personnel spend only 3 percent of their time performing surveillance activities, and only 11 percent of their time is dedicated to management and supervisory duties. Table 14 shows those tasks which best define the 7-skill level "D" shred personnel. The emphasis on Weapons Director tasks is expected. Personnel in this group still are performing a minimal amount of supervisory-related tasks, concentrating instead on the technical tasks concerning

TABLE 11
REPRESENTATIVE TASKS PERFORMED BY 1A471 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=56)
B104 Maintain crew coordination	89
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	88
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	88
B72 Conduct radio checks with ground or airborne agencies	84
A12 Inspect personal professional equipment	84
A19 Operate galley equipment, such as ovens or coffeemakers	84
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	82
B105 Maintain tactical situation awareness	80
A37 Preflight life support equipment	80
B134 Respond to computer alarms or alerts	80
B118 Perform authentication procedures	80
A42 Secure equipment for takeoffs or landings	79
B93 Identify and report computer malfunctions	79
B80 Coordinate operations with external agencies	77
B98 Interpret mission systems console displays	77
A40 Report mission equipment discrepancies or malfunctions to operational supervisors or aircraft commanders	77
B138 Review communications plans	77
A14 Load crew gear or personal equipment on aircraft	77
A7 Don or doff aircrew protective clothing, such as antiexposure suits	77
A25 Participate in premission intelligence briefings	75
B96 Insert operational data into computers	73
A34 Perform or practice emergency aircraft egress procedures	73
A6 Don or doff aircrew chemical warfare ensemble	73
B49 Analyze mission information on schedules, status boards, or displays	71
B124 Perform mission systems console operational checks	71
A8 Don or doff ground crew chemical warfare ensemble	71
A1 Identify or dispose of foreign object damage (FOD)	71
A9 Fire small arms for qualification	71
A32 Perform procedures in altitude chambers	71
B75 Configure console displays to depict operational information, such as coastlines, air bases, or training areas	68
B108 Monitor data link displays	66
G400 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	66
G384 Evaluate personnel for compliance with performance standards	66
G353 Counsel subordinates concerning personal matters	66

* Average Number of Tasks Performed - 151

TABLE 12

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 1A451 AND DAFSC 1A471 PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	DAFSC 1A451 (N= 173)	DAFSC 1A471 (N=56)	DIFF
D231 Complete correlation checks with air tracks	65	34	31
A36 Pick up or turn in support items, such as coffee or water jugs	77	46	31
D261 Maintain track logs	63	32	31
D252 Input flight plan data	57	27	30
A20 Order or pickup aircrew flight lunches	81	54	27
B44 Accept assigned tracks	64	37	27
 B85 Determine mission communications requirements	 16	 50	 -34
G353 Counsel subordinates concerning personal matters	32	66	-34
G418 Write recommendations for awards or decorations	24	57	-33
G374 Establish performance standards for subordinates	22	55	-33
G400 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	33	66	-33
 G356 Determine or establish work assignments or priorities	 21	 53	 -32
G385 Evaluate personnel for promotion, demotion, reclassification, or special awards	20	52	-32
E296 Identify and report communications malfunctions	16	48	-32
G384 Evaluate personnel for compliance with performance standards	34	66	-32
G413 Supervise military personnel	33	64	-31
B140 Review operations or concept plans	19	50	-31
G349 Conduct supervisory performance feedback sessions	32	63	-31
G408 Review drafts or policy directives, instructions, or manuals	8	37	-29
B138 Review communications plans	48	77	-29
E314 Perform secure radio procedures	32	61	-29
E293 Establish communications links	13	41	-28
G415 Write job or position descriptions	9	37	-28
G409 Schedule personnel for temporary duty (TDY) assignment, leaves, or passes	17	45	-28
G416 Write performance reports or supervisory appraisals	27	55	-28

TABLE 13
REPRESENTATIVE TASKS PERFORMED BY 1A451 "D" SHRED PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=59)
C149 Accept control of aircraft from other control agencies	98
B60 Assist in conducting tactical intercepts	98
C172 Direct aircraft to make IFF/SIF changes	98
A9 Fire small arms for qualification	98
B117 Perform airborne warning and control systems (AWACS) monitor procedures	97
C157 Conduct air refueling operations	97
B55 Assist in conducting air refueling operations	97
C174 Direct aircraft flow to assigned targets, tankers, or airspace	97
B58 Assist in conducting offensive missions	97
B57 Assist in conducting defensive missions	97
B118 Perform authentication procedures	97
A19 Operate galley equipment, such as ovens or coffeemakers	97
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	95
C166 Determine aircraft positions during dissimilar or aerial combat tactics (DACT or ACT) missions or exercises	95
C217 Transmit operational brevity codes	95
C162 Conduct tactical intercepts	95
C165 Deconflict aircraft with respect to routes, altitudes, or headings	95
C192 Hand off aircraft to other controlling agencies	95
C189 Evaluate mission compliance with rules of engagement	93
C204 Prebrief or debrief fighter crews	93
C163 Control aircraft at orbit points, such as strategic orbit points (STOPs), combat air patrol (CAP) points, or initial points (IPs)	93
C160 Conduct offensive missions	93
C159 Conduct defensive missions	93
C221 Transmit weapons safe checks to aircraft	93
C167 Determine geometries	93
C223 Transmit target information to aircraft, such as bearings, ranges, or altitudes	92
C213 Transmit airspace information to aircraft	92
C188 Evaluate mission compliance with flight safety regulations	92
B61 Break ATOs or ACOs	92
C197 Monitor or direct HVAs	92
C173 Direct aircraft to terminate missions or return to bases	92
A7 Don or doff aircrew protective clothing, such as antiexposure suits	92
B105 Maintain tactical situation awareness	90
C196 Monitor flying safety	90
C224 Vector aircraft manually or by using computer-generated solutions	90
C153 Analyze verbal or visual air pictures to determine mission tactics	90
C187 Evaluate displayed threats	90

Average number of tasks performed - 173

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY 1A471 "D" SHRED PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=30)
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	97
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	97
A12 Inspect personal professional equipment	97
A6 Don or doff aircrew chemical warfare ensemble	97
A9 Fire small arms for qualification	97
B105 Maintain tactical situation awareness	93
C182 Evaluate adversary aircraft maneuvers during DACT or ACT exercises	93
C149 Accept control of aircraft from other control agencies	93
C162 Conduct tactical intercepts	93
C204 Prebrief or debrief fighter aircrews	93
C160 Conduct offensive missions	93
C163 Control aircraft at orbit points, such as strategic orbit points (STOPs), combat air patrol (CAP) points, or initial points (IPs)	93
C159 Conduct defensive missions	93
C154 Assign or commit weapons	93
B57 Assist in conducting defensive missions	93
B58 Assist in conducting offensive missions	93
C172 Direct aircraft to make IFF/SIF changes	93
C157 Conduct air refueling operations	93
A19 Operate galley equipment, such as ovens or coffeemakers	93
C173 Direct aircraft to terminate missions or return to bases	93
B59 Assist in conducting search and rescue missions	93
A5 Demonstrate use of life support equipment to passengers	93
A7 Don or doff aircrew protective clothing, such as antiexposure suits	93
C166 Determine aircraft positions during dissimilar or aerial combat tactics (DACT or ACT) missions or exercises	90
C165 Deconflict aircraft with respect to routes, altitudes, or headings	90
C213 Transmit airspace information to aircraft	90
C192 Hand off aircraft to other controlling agencies	90
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	90
B61 Break ATOs or ACOs	90
C211 Request aircraft status information, such as fuel or fire control information	90
C174 Direct aircraft flow to assigned targets, tankers, or airspace	90
B55 Assist in conducting air refueling operations	90
C201 Perform flight following	90
C203 Position aircraft for intercepts	90
B118 Perform authentication procedures	90
A14 Load crew gear or personal equipment on aircraft	90

Average number of tasks performed - 208

weapons directing. Table 15 shows the tasks which best differentiate between the 5- and 7-skill level in the "D" shred. As expected, emphasis on supervisory tasks by the 7-skill level was the greatest difference between the two groups.

DAFSC 1A491/00. The nine NCOs who hold the 9- or CEM-skill level DAFSC (2 percent of the survey sample) perform an average of 151 tasks. As Table 6 demonstrates, personnel at the 9-skill and CEM levels are still mostly in the Air Surveillance Job (56 percent). The main difference between the 9- and CEM-skill levels is that 22 percent of this group are in the Communications Technician Job. This is expected, since the majority of the members of this job are senior level personnel. As Table 7 shows, 33 percent of their time is spent performing management and supervisory activities. This is the highest percentage of any of the skill-level groups for this duty. However, similar to the other skill-level groups, 29 percent of their time is spent performing general operating or simulator activities. Table 16 lists the most common tasks performed by 9- and CEM-skill level personnel. While the majority of tasks are supervisory in nature, a small percentage of tasks are still technical tasks. Table 17 shows those tasks which best differentiate the 7-, 9-, and CEM-skill levels. As expected, key differences at the 9- and CEM-skill levels are greater emphasis on supervision and administration duties.

Summary

Personnel in the Airborne Battle Management Systems career ladder do not progress from technical-related tasks to supervisory-related tasks until they reach the 9- and CEM-skill levels. The technical tasks that are performed by the 3-skill levels are also performed by a large percentage of 5- and 7-skill level personnel. Very little of their time is devoted to supervisory and training duties. Personnel at each skill level are spending most of their time performing general operating or simulator activities, while personnel at the 3- and 5-skill levels are also spending much of their time performing common aircrew activities. Personnel in the "D" shred spend most of their time performing Weapons Director activities, but still spend a large amount of time performing general operating or simulator activities. The major difference between the skill levels is the inclusion of a minimal amount of supervisory tasks up to and including the 7-skill level. The 9- and CEM-skill levels have much more emphasis on performing supervisory tasks, but are still performing some general operating or simulator activities.

TRAINING ANALYSIS

Occupational survey data represent one of many sources of information which are used to assist in the development of training programs for career ladder personnel. OSR data useful to training personnel include job descriptions for the various jobs performed within a career ladder,

TABLE 15

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 1A451D AND DAFSC 1A471D PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	DAFSC 1A451D (N=59)	DAFSC 1A471D (N=30)	DIFF
G344 Assign personnel to work areas or duty positions	6	63	-57
G418 Write recommendations for awards or decorations	24	77	-53
G374 Establish performance standards for subordinates	17	63	-46
G363 Develop or establish work schedules	18	63	-45
G364 Direct administrative functions	7	50	-43
G413 Supervise military personnel	30	73	-43
G347 Conduct self-inspections or self-assessments	15	56	-41
G385 Evaluate personnel for promotion, demotion, reclassification, or special awards	22	63	-41
G411 Schedule work assignments or priorities	8	46	-38
G362 Develop or establish work methods or procedures	15	53	-38
G397 Interpret policies, directives, or procedures for subordinates	22	60	-38
G351 Conduct supervisory orientations for newly assigned personnel	22	60	-38
H427 Counsel trainees on training progress	22	60	-38
G416 Write performance reports or supervisory appraisals	25	63	-38
G384 Evaluate personnel for compliance with performance standards	25	63	-38
G349 Conduct supervisory performance feedback sessions	29	67	-38
G353 Counsel subordinates concerning personal matters	35	73	-38
G415 Write job or position description	3	40	-37
G396 Inspect personnel for compliance with military standards	27	63	-36
G365 Direct training functions	8	43	-35
H438 Evaluate progress of trainees	15	50	-35
G387 Evaluate work schedules	15	50	-35
G356 Determine or establish work assignments or priorities	18	53	-35
H437 Evaluate effectiveness of training programs, plans, or procedures	10	43	-33

TABLE 16

REPRESENTATIVE TASKS PERFORMED BY 1A490/00 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=9)
G380 Evaluate job or position descriptions	89
G364 Direct administrative functions	89
G358 Develop organizational or functional charts	89
G344 Assign personnel to work areas or duty positions	89
G401 Plan briefings, conferences, or workshops	89
B104 Maintain crew coordination	89
B105 Maintain tactical situation awareness	89
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	89
B125 Perform sectional debriefings following missions	89
A37 Preflight life support equipment	89
A42 Secure equipment for takeoffs or landings	89
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	89
A25 Participate in premission intelligence briefings	89
A24 Participate in postflight intelligence briefings	89
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	89
G394 Initiate personnel action requests	78
G385 Evaluate personnel for promotion, demotion, reclassification, or special awards	78
G400 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	78
B110 Monitor equipment performance	78
B124 Perform mission systems console operational checks	78
G356 Determine or establish work assignments or priorities	78
G353 Counsel subordinates concerning personal matters	78
G418 Write recommendations for awards or decorations	78
G397 Interpret policies, directives, or procedures for subordinates	78
G351 Conduct supervisory orientations for newly assigned personnel	78
G396 Inspect personnel for compliance with military standards	78
G375 Establish procedures for accountability of equipment, tools, parts, or supplies	67
G413 Supervise military personnel	67
B119 Perform communications network configurations and monitoring procedures	67
G377 Evaluate budget requirements	56
G366 Draft budget requirements	56
G345 Assign sponsors for newly assigned personnel	56
H445 Schedule training	33
G371 Establish administrative files, such as correspondence files or classified files	33

* Average Number of Tasks Performed - 168

TABLE 17

**TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 1A471 AND DAFSC 1A491/00 PERSONNEL
(PERCENT MEMBERS PERFORMING)**

TASKS	DAFSC 1A471 (N=565)	DAFSC 1A491/00 (N=310)	DAFSC	DAFSC	DIFF
			1A471/00	1A491/00	
I461 Inventory classified materials	38	0	35	35	
I452 Destroy classified materials	57	22	35	35	
G358 Develop organizational or functional charts	25	89	-64	-64	
G380 Evaluate job or position descriptions	30	89	-59	-59	
G394 Initiate personnel action requests	20	78	-58	-58	
G401 Plan briefings, conferences, or workshops	36	89	-53	-53	
G354 Determine or establish logistics requirements, such as personnel, equipment, tools, parts, or workspace	25	78	-53	-53	
G364 Direct administrative functions	78	89	-51	-51	
G375 Establish procedures for accountability of equipment, tools, parts, or supplies	16	67	-51	-51	
G381 Evaluate job-related suggestions	32	78	-46	-46	
G344 Assign personnel to work areas or duty positions	47	89	-42	-42	
G415 Write job or position descriptions	38	78	-40	-40	
A38 Preflight mission kits or flyaway kits	38	78	-40	-40	
G408 Review drafts of policy directives, instructions, or manuals	38	78	-40	-40	
G378 Evaluate inspection report findings or inspection procedures	16	55	-39	-39	
G366 Draft budget requirements	16	55	-39	-39	
G369 Draft supplements or changes to directives, such as policy directives, instructions, or manuals	29	67	-38	-38	
G377 Evaluate budget requirements	18	56	-38	-38	
GA24 Participate in postflight intelligence briefings	52	89	-37	-37	
G361 Develop inputs to mobility, contingency, disaster preparedness, or unit emergency or alert plans	20	56	-36	-36	
G345 Assign sponsors for newly assigned personnel	20	56	-36	-36	
G382 Evaluate logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	20	56	-36	-36	
G398 Investigate accidents or incidents	8	44	-36	-36	
B64 Brief other sections on areas of responsibility	54	89	-35	-35	

distribution of personnel across career ladder jobs, percentages of personnel performing specific tasks, and percentages of personnel maintaining specific equipment or systems, as well as the difficulty of tasks and TE ratings gathered from senior members of the career ladder.

First-Enlistment Analysis

In this study, there are 108 Airborne Battle Management Systems members in their first enlistment (1-48 months TAFMS), representing 27 percent of the survey sample. As displayed in Table 18, 35 percent of their time is spent performing general operating or simulator activities, while 26 percent of their time is spent performing surveillance activities, and 25 percent is spent performing common aircrew activities. Figure 2 shows that 86 percent of first-enlistment personnel are working in the Air Surveillance Job. Additionally, 7 percent are working in the Air Operations Job, and 4 percent are grouped into the Weapons Director Job. There were no first-enlistment personnel in the Instructor or Communications Technician jobs. This is not surprising, since personnel at the higher skill levels perform these jobs.

Table 19 displays commonly performed tasks for first-enlistment personnel. The majority of tasks displayed involve performing various air operations and aircrew technical tasks.

Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary factors that can help technical school personnel decide which entry-level training tasks to emphasize. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide training personnel with a rank ordering of those tasks considered important for first-enlistment airman training (TE), and a measure of the difficulty of those tasks (TD). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel. This decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

Table 20 lists the tasks having the highest TE ratings, as well as the percentages of first-job, first-enlistment, and TD ratings for each task for personnel without the "D" shred. The majority of high TE tasks are performed by high percentages of both the first-job and first-enlistment groups. Most of the tasks identified with high training emphasis were from either the Performing common aircrew activities duty (Duty A), or the Performing general operating or simulator activities duty (Duty B). Since there are not any "D" shred personnel in their first enlistment, a TE analysis was not performed for personnel in the "D" shred.

TABLE 18
RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 1A4X1 PERSONNEL

DUTY	AVERAGE PERCENT TIME SPENT (N=108)
A PERFORMING COMMON AIRCREW ACTIVITIES	25
B PERFORMING GENERAL OPERATING OR SIMULATOR ACTIVITIES	35
C PERFORMING WEAPONS DIRECTOR (WD) ACTIVITIES	1
D PERFORMING SURVEILLANCE ACTIVITIES	26
E PERFORMING COMMUNICATIONS AND COMMAND AND CONTROL ACTIVITIES	5
F PERFORMING ELECTRONIC WARFARE (EW) ACTIVITIES	4
G PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	2
H PERFORMING TRAINING ACTIVITIES	1
I PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER SYSTEM ACTIVITIES	2
J PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	*

NOTE: Columns may not add to 100 percent due to rounding

1A4X1 FIRST ENLISTMENT JOBS

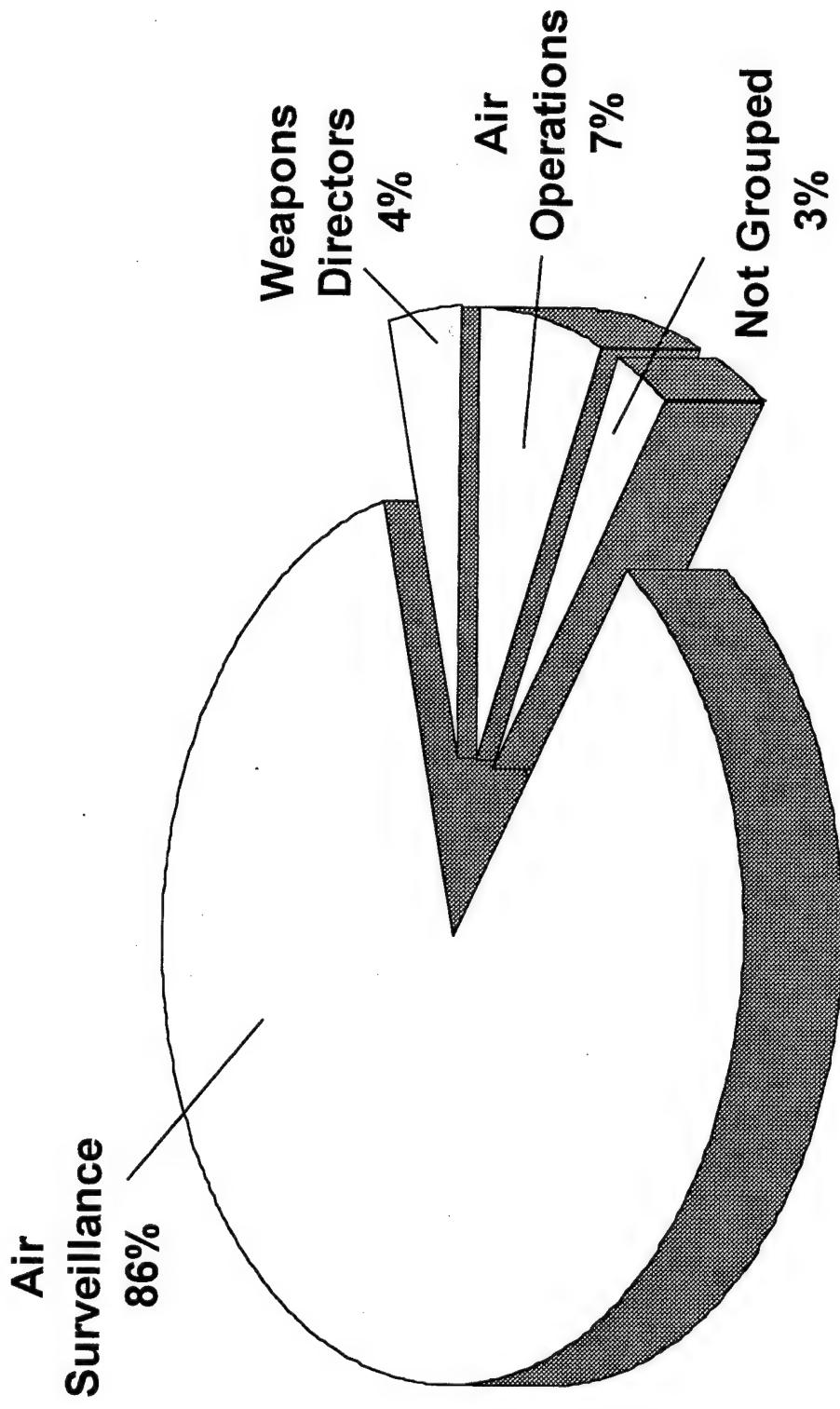


FIGURE 2

TABLE 19
REPRESENTATIVE TASKS PERFORMED BY 1A4X1 FIRST-ENLISTMENT PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=108)
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	95
A19 Operate galley equipment, such as ovens or coffeemakers	94
A9 Fire small arms for qualification	93
A20 Order or pickup aircrew flight lunches	91
A6 Don or doff aircrew chemical warfare ensemble	91
A12 Inspect personal professional equipment	90
A36 Pick up or turn in support items, such as coffee or water jugs	90
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	90
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	89
A21 Participate in combat survival training	86
A10 Identify or dispose of foreign object damage (FOD)	85
B104 Maintain crew coordination	84
D250 Identify emergency symbols or codes	84
A7 Don or doff aircrew protective clothing, such as antiexposure suits	82
B117 Perform airborne warning and control systems (AWACS) monitor procedures	81
D270 Perform voice tell procedures	81
A25 Participate in premission intelligence briefings	81
D228 Assist in determining or determine track classifications or identifications	81
A37 Preflight life support equipment	80
A14 Load crew gear or personal equipment on aircraft	80
B118 Perform authentication procedures	80
D247 Identify aircraft using IFF/SIF procedures	79
B90 Evaluate track data	79
D268 Perform passive tracking	79
B105 Maintain tactical situation awareness	78
B134 Respond to computer alarms or alerts	78
D231 Complete correlation checks with air tracks	78
A8 Don or doff ground crew chemical warfare ensemble	78
D239 Detect targets and initiate track symbology on present position of data	77
D251 Identify radar data	77
B132 Record track activities	77
D263 Monitor passive tracking	77
D261 Maintain track logs	76
D248 Identify aircraft using methods other than IFF/SIF procedures	75
B44 Accept assigned tracks	75
B72 Conduct radio checks with ground or airborne agencies	75
D260 Maintain track continuity	74

* Average Number of Tasks Performed - 99

TABLE 20

TECHNICAL TASKS RATED HIGHEST IN TRAINING EMPHASIS (TE)
BY AFSC 1A4X1 PERSONNEL WITHOUT THE "D" SHRED

TASKS	PERCENT MEMBERS PERFORMING			
	TNG EMP*	1ST JOB	1ST ENL	TASK DIFF**
A41 Review and sign-off flight crew information files (FCIRFs), mission operations read files (MORFs), or operations read files (ORFs)	6.50	93	95	2.89
A12 Inspect personal professional equipment	6.31	89	90	3.27
D251 Identify radar data	6.27	64	77	3.71
B118 Perform authentication procedures	6.23	79	80	4.70
D247 Identify aircraft using IFF/SIF procedures	6.23	68	79	4.50
B104 Maintain crew coordination	6.23	86	84	5.73
A7 Don or doff aircrew protective clothing, such as antiexposure suits	6.19	71	82	4.20
A18 Operate fire extinguishers	6.15	11	23	3.48
B105 Maintain tactical situation awareness	6.15	86	78	6.01
D250 Identify emergency symbols or codes	6.15	71	84	4.19
D239 Detect targets and initiate track symbology on present position of data	6.15	57	77	3.89
D2260 Maintain track continuity	6.15	46	74	4.63
B98 Interpret mission systems console displays	6.08	54	64	4.63
B90 Evaluate track data	6.08	68	79	4.74
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	6.04	86	90	4.43
B117 Perform airborne warning and control systems (AWACS) monitor procedures	5.88	71	81	4.64
A8 Don or doff ground crew chemical warfare ensemble	5.85	71	78	4.62
A37 Preflight life support equipment	5.81	64	80	3.65
A34 Perform or practice emergency aircraft egress procedures	5.77	68	74	4.76
D255 Interrogate tracks for IFF/SIF responses	5.65	46	73	4.12
E312 Perform radio/telephone (R/T) procedures	5.62	25	34	3.87
A17 Operate emergency escape hatches	5.58	29	35	3.78

* Mean TE Rating is 1.99, and Standard Deviation is 1.59 (High TE = 3.58)

** Average TD Rating is 5.00

Table 21 lists the tasks having the highest TD ratings, with the percentages of first-job, first-enlistment, 3-, 5-, and 7-skill level personnel performing, and TE ratings included for each task for personnel without the "D" Shred. Most of the tasks that indicated the highest TD ratings were Weapons Director tasks, but were performed by very small percentages of personnel. Table 22 shows tasks with the highest TD ratings as rated by "D" shred personnel. As expected, the majority of these tasks also involve Weapons Director tasks. Most of the tasks with high difficulty for this group were performed by fairly high percentages of both the 5- and the 7-skill level personnel holding a "D" shred. Various lists of tasks, accompanied by TD rating, are contained in the Training Extract package and should be reviewed in detail by technical school personnel. For a more detailed explanation of TD and TE ratings, see the Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.

Specialty Training Standard (STS)

A comprehensive review of the STS was made by comparing survey data to STS elements. SMEs matched JI tasks to appropriate STS sections and subsections. A complete computer listing displaying the percent members performing tasks, TE and TD ratings for each task, along with the STS matching, has been forwarded to the school for further review of training documents.

Typically, tasks which have sufficiently high TE and TD ratings, and are performed by at least 20 percent of personnel in appropriate experience or skill-level groups (such as first-enlistment or 1-48 months TAFMS, and 5-, and 7-skill level groups), should be considered for inclusion in the STS. Likewise, tasks with less than 20 percent performing in all of these groups should be considered for deletion from the STS. There were no line items from the STS that were not supported by 20 percent of personnel.

Tasks not matched to any element of the STS are listed at the end of the STS computer listing. These were reviewed to determine if there were any tasks concentrated around any particular functions or jobs. Most of the tasks not matched were from the Performing common aircrew activities duty section. Examples of tasks not matched are in Table 23. Training personnel and SMEs should review these and other unreferenced tasks to determine STS inclusion.

JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators of various groups can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. Questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions were included in the survey booklet to provide indications of job satisfaction.

TABLE 21

TASKS RATED HIGHEST IN TASK DIFFICULTY (TD) BY AFSC 1A4X1 PERSONNEL WITHOUT THE "D" SHRED

TASKS	TASK DIFF*	PERCENT MEMBERS PERFORMING					TNG EMP*
		1ST JOB	1ST ENL	1A431	1A451	1A471	
C165	Deconflict aircraft with respect to routes, altitudes, or headings	7.36	0	1	0	7	20
C171	Direct aircraft to achieve critical timing positioning parameters	7.31	4	1	0	5	7
C182	Evaluate adversary aircraft maneuvers during DACT or ACT exercises	7.28	4	2	1	5	.54
C202	Plan Blue Force or Red Force tactics	7.23	0	0	0	3	.62
C214	Transmit DACT or ACT commands or information in tactical control environments	7.17	0	0	0	3	.19
C167	Determine geometries	7.11	0	0	0	3	.35
C183	Evaluate aircraft flow to assigned targets, tankers, or airspace	7.04	0	1	0	7	.35
F340	Perform tactical missile detection activities	6.93	11	11	12	10	1.04
C224	Vector aircraft manually or by using computer-generated solutions	6.90	0	1	0	4	.50
B84	Design simulated exercises	6.89	7	7	6	12	.35
C158	Conduct covert intercepts	6.81	4	1	0	5	.46
C162	Conduct tactical intercepts	6.79	0	0	0	4	.65
C170	Determine whether to proceed with aircraft missions or intercepts	6.77	4	1	0	5	.62
C206	Recommend mission tactics based on verbal or visual air pictures	6.77	0	0	0	5	.38
B106	Manage data link operations	6.74	11	25	23	44	.55
C203	Position aircraft for intercepts	6.73	0	0	0	3	.42
C160	Conduct offensive missions	6.68	4	4	1	8	.62
C156	Conduct AG operations, such as close air support or air interdictions	6.67	4	3	0	9	1.15
C189	Evaluate mission compliance with rules of engagement	6.65	4	6	3	40	1.96
C212	Resolve airspace conflicts	6.65	0	0	0	5	.69
C161	Conduct search and rescue missions	6.64	7	5	1	13	1.19
C169	Determine STOPS in flush or vertical dispersal operations	6.64	0	0	0	2	.54
B86	Develop targets	6.56	25	17	12	17	1.19
F334	Evaluate quality of processed data after applying electronic protection	6.54	11	23	26	20	1.88

* Average TD Rating is 5.00

** Mean TE Rating is 1.99, and Standard Deviation is 1.59 (High TE = 3.58)

TABLE 22

TASKS RATED HIGHEST IN TASK DIFFICULTY (TD) BY AFSC 1A4X1 "D" SHRED PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING				
	TASK DIFF*	1A451D	1A471D	TNG	EMP*
B105 Maintain tactical situation awareness	7.34	90	93	7.25	
F328 Analyze or work through communications electronic attack	7.18	64	77	5.25	
E272 Analyze varying tactical situations	7.07	53	67	5.08	
C202 Plan Blue Force or Red Force tactics	7.05	41	53	3.75	
F333 Determine positions, types, or intensities of electronic attack	6.99	27	33	3.92	
C167 Determine geometries	6.91	93	87	5.50	
C182 Evaluate adversary aircraft maneuvers during DACT or ACT exercises	6.88	88	93	6.33	
B84 Design simulated exercises	6.83	15	20	6.67	
C206 Recommend mission tactics based on verbal or visual air pictures	6.82	69	73	5.33	
F340 Perform tactical missile detection activities	6.80	8	20	.92	
C177 Direct tactics, such as formations, headings, or geometries	6.80	76	80	4.42	
C161 Conduct search and rescue missions	6.78	90	83	6.08	
C189 Evaluate mission compliance with rules of engagement	6.73	93	87	5.25	
B59 Assist in conducting or conduct beam writer tactics	6.67	90	93	5.17	
C183 Evaluate aircraft flow to assigned targets, tankers, or airspace	6.64	80	80	5.08	
E275 Broadcast threat information to tactical aircraft	6.63	66	73	5.67	
F329 Assist in conducting or conduct beam writer tactics	6.62	22	50	2.50	
G406 Plan deployments of equipment or personnel	6.62	5	17	.00	
C160 Conduct offensive missions	6.62	93	93	6.50	
C166 Determine aircraft positions during dissimilar or aerial combat tactics (DACT or ACT) missions or exercises	6.61	95	90	5.42	
H432 Develop training programs, plans, or procedures	6.61	7	30	1.92	
C162 Conduct tactical intercepts	6.60	95	93	6.92	
B50 Analyze sensor performances	6.55	53	50	4.83	
C178 Direct release of airdrops, air-to-air weapons, or air-to-ground weapons	6.54	39	40	2.17	
B51 Analyze simulator products, such as scenarios or hardware modifications	6.53	22	33	2.08	

* Average TD Rating is 5.00

** Mean TE Rating is 2.81, and Standard Deviation is 1.97 (High TE= 4.78)

TABLE 23

TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE
GROUP MEMBERS BUT NOT REFERENCED TO STS FOR DAFSC 1A4X1

TASKS	PERCENT MEMBERS PERFORMING						TSK DIF
	TNG EMP	1ST JOB	1ST ENL	1A431 (N=69)	1A451 (N=173)	1A471 (N=56)	
A9 Fire small arms for qualification	4.04	89	93	91	92	71	4.15
A11 Initiate or review AFTO Form 78 1-series for aircraft discrepancies	2.85	36	31	35	43	55	3.80
A14 Load crew gear or personal equipment on aircraft	2.85	71	80	77	81	77	2.22
A28 Perform new equipment validation flight tests	1.23	7	11	12	16	23	6.02
A30 Perform physical security of aircraft or equipment	1.96	25	33	38	32	34	3.80
A31 Perform postflight aircraft security measures	1.81	11	21	26	21	27	3.30
A42 Secure equipment for takeoffs or landings	4.96	79	72	62	84	79	2.51
B47 Analyze aircrew simulator performances	1.92	25	31	29	40	39	5.57
B51 Analyze simulator products, such as scenarios or hardware modifications	1.00	25	23	20	23	39	5.88
B53 Analyze or post air tasking orders (ATOs) or aerospace control orders (ACOs)	2.54	25	32	28	35	48	6.14
B71 Conduct operational analyses of new computer programs	1.08	11	10	7	18	30	6.18
B74 Conduct simulated exercises	2.38	68	60	61	60	61	5.38
B117 Perform airborne warning and control systems (AWACS) monitor procedures	5.88	71	81	90	74	48	4.64
B119 Perform communications network configurations and monitoring procedures	2.15	21	17	17	21	39	4.71
B146 Study enemy or friendly tactics, formations, or aircraft and equipment capabilities	3.00	57	56	54	62	54	5.92

TD MEAN = 5.00, SD = 1.00
TE MEAN = 1.99, SD = 1.59

The Airborne Battle Management Systems survey booklet included questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions. The responses of the current survey sample were then analyzed by making the following comparisons: (1) among TAFMS groups of the Airborne Battle Management Systems career ladder from the current study and the 1994 Airborne Warning Command and Control Systems study, and (2) across specialty groups identified in the **SPECIALTY JOBS** section of the report.

Table 24 compares first-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data for personnel who are not "D" shred personnel to corresponding enlistment groups from the previous study. These data give a relative measure of how the job satisfaction of AFSC 1A4X1 personnel compares with the study completed in 1994. Similarly, Table 25 shows this same information for the personnel in the "D" shred. Job satisfaction was lower than the previous OSR for all of the TAFMS groups in every job satisfaction indicator except for the perceived utilization of training category. The current study is higher for this indicator for almost every TAFMS group. This indicates that personnel are being trained for their jobs, but are generally unhappy with their jobs.

An examination of job satisfaction data can also reveal the influences performing certain jobs may have on overall job satisfaction. Table 26 presents job satisfaction data for the jobs identified in the career ladder structure for AFSC 1A4X1. Overall, job satisfaction was fairly good across most specialty jobs. The job with the lowest job interest is the Air Operations Job. Job satisfaction was highest for the Weapons Director and Communications Technician jobs.

When there are issues in an occupation that are not directly addressed in the JI, survey respondents frequently provide write-in comments. The majority of write-in comments dealt with explaining the type of job held or expanded upon the specific type of equipment used.

IMPLICATIONS

As explained in the **INTRODUCTION**, this survey was conducted as part of the production cycle and to provide training personnel with current information on the Airborne Battle Management Systems career ladder for use in reviewing current training programs and training documents. Overall, job progression is atypical with personnel not performing supervisory tasks until the 9- and CEM-skill levels. Job satisfaction is fairly low, with reenlistment intentions low for first-enlistment personnel. Analysis of career ladder documents indicate the STS does not contain any unsupported line items; however, there are several tasks that are not included in the STS, but are performed by a high percentage of personnel.

TABLE 24

COMPARISON OF CURRENT SURVEY AND PREVIOUS SURVEY TAFMS GROUPS
 FOR IA4X1 PERSONNEL WITHOUT "D" SHRED
 (PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS			49-96 MONTHS TAFMS			97+ MONTHS TAFMS		
	1998 IA4X1 (N=108)	1994 IA4X1 (N=79)	1998 IA4X1 (N=69)	1998 IA4X1 (N=56)	1994 IA4X1 (N=56)	1998 IA4X1 (N=121)	1994 IA4X1 (N=117)		
<u>EXPRESSED JOB INTEREST:</u>									
INTERESTING	62	81	54	73	72	82			
SO-SO	22	11	22	18	14	7			
DULL	15	8	25	9	13	11			
<u>PERCEIVED UTILIZATION OF TALENTS:</u>									
FAIRLY WELL TO PERFECTLY	64	79	57	91	79	83			
LITTLE OR NOT AT ALL	36	21	43	9	21	17			
<u>PERCEIVED UTILIZATION OF TRAINING:</u>									
FAIRLY WELL TO PERFECTLY	92	96	93	87	89	84			
LITTLE OR NOT AT ALL	8	4	7	13	11	16			
<u>SENSE OF ACCOMPLISHMENT GAINED FROM WORK:</u>									
SATISFIED	54	77	48	64	64	75			
NEUTRAL	26	8	16	11	15	6			
DISSATISFIED	20	15	36	25	21	19			
<u>REENLISTMENT INTENTIONS:</u>									
YES, OR PROBABLY YES	39	65	48	73	64	74			
NO, OR PROBABLY NO	60	35	52	27	10	12			
PLAN TO RETIRE	1	0	0	0	26	14			

TABLE 25

COMPARISON OF CURRENT SURVEY AND PREVIOUS SURVEY TAFMS GROUPS
 FOR 1A4X1 "D" SHRED PERSONNEL
 (PERCENT MEMBERS RESPONDING)

	49-96 MONTHS TAFMS			97+ MONTHS TAFMS		
	1998 1A4X1 (N=23)	1994 1A4X1D (N=56)	(N=23)	1998 1A4X1 (N=23)	1994 1A4X1D (N=117)	(N=117)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	65	73		65	82	
SO-SO	17	18		17	7	
DULL	17	9		17	11	
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY	70	91		70	83	
LITTLE OR NOT AT ALL	30	9		30	17	
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY	91	87		91	84	
LITTLE OR NOT AT ALL	9	13		9	16	
<u>SENSE OF ACCOMPLISHMENT GAINED FROM WORK:</u>						
SATISFIED	48	64		48	75	
NEUTRAL	13	11		13	6	
DISSATISFIED	39	25		39	19	
<u>REENLISTMENT INTENTIONS:</u>						
YES, OR PROBABLY YES	48	73		48	74	
NO, OR PROBABLY NO	52	27		52	12	
PLAN TO RETIRE	0	0		0	14	

TABLE 26

COMPARISONS OF JOB SATISFACTION INDICATORS FOR MEMBERS OF SPECIALTY JOBS FOR AFSC 1A4X1
(PERCENT MEMBERS RESPONDING)

	AIR SURVEILLANCE (STG18) (N=235)	WEAPONS DIRECTORS (STG23) (N=118)	AIR OPERATIONS TECHNICIAN (STG20) (N=9)	COMMUNICATION SYSTEMS (STG37) (N=10)	INSTRUCTORS (STG17) (N=5)
<u>EXPRESSED JOB INTEREST:</u>					
INTERESTING	62	78	44	70	60
SO-SO	20	14	22	30	20
DULL	18	8	33	0	20
<u>PERCEIVED UTILIZATION OF TALENTS:</u>					
FAIRLY WELL TO PERFECTLY	65	84	56	90	80
LITTLE OR NOT AT ALL	35	16	44	10	20
<u>PERCEIVED UTILIZATION OF TRAINING:</u>					
FAIRLY WELL TO PERFECTLY	91	91	89	100	80
LITTLE OR NOT AT ALL	9	9	11	0	20
<u>SENSE OF ACCOMPLISHMENT GAINED FROM WORK:</u>					
SATISFIED	54	65	44	80	60
NEUTRAL	20	9	23	10	20
DISSATISFIED	25	26	33	10	20
<u>REENLISTMENT INTENTIONS:</u>					
YES, OR PROBABLY YES	52	60	56	50	60
NO, OR PROBABLY NO	40	28	44	0	40
PLAN TO RETIRE	8	12	0	50	0

From the standpoint of data gathered, the AFSC 1A4X1 career ladder structure reflects little diversity, with only five jobs performed by career ladder members. Almost two-thirds of the survey sample were in the Air Surveillance Job, while another 30 percent were in the Weapons Director Job.

APPENDIX A

**SELECTED REPRESENTATIVE TASKS PERFORMED BY
MEMBERS OF CAREER LADDER JOBS**

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TABLE A1
AIR SURVEILLANCE CLUSTER

TASKS	PERCENT MEMBERS PERFORMING (N=235)
A19 Operate galley equipment, such as ovens or coffeemakers	98
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	96
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	92
A12 Inspect personal professional equipment	92
A9 Fire small arms for qualification	91
A20 Order or pickup aircrew flight lunches	91
B90 Evaluate track data	91
D250 Identify emergency symbols or codes	91
B104 Maintain crew coordination	91
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	91
A6 Don or doff aircrew chemical warfare ensemble	90
B134 Respond to computer alarms or alerts	90
B117 Perform airborne warning and control systems (AWACS) monitor procedures	89
D228 Assist in determining or determine track classifications or identifications	89
D247 Identify aircraft using IFF/SIF procedures	89
D251 Identify radar data	89
D239 Detect targets and initiate track symbology on present position of data	89
D260 Maintain track continuity	89
B118 Perform authentication procedures	88
A14 Load crew gear or personal equipment on aircraft	87
A7 Don or doff aircrew protective clothing, such as antiexposure suits	87
D270 Perform voice tell procedures	86
B132 Record track activities	86
D263 Monitor passive tracking	86
A36 Pick up or turn in support items, such as coffee or water jugs	85
B72 Conduct radio checks with ground or airborne agencies	85
D268 Perform passive tracking	85
D254 Interpret IFF/SIF computer-generated returns for identifying air or surface tracks	85
A37 Preflight life support equipment	85
A10 Identify or dispose of foreign object damage (FOD)	85
D248 Identify aircraft using methods other than IFF/SIF procedures	84
A25 Participate in premission intelligence briefings	84
B76 Configure data bases	84
D255 Interrogate tracks for IFF/SIF responses	83
D231 Complete correlation checks with air tracks	83
D238 Coordinate voice tells with appropriate agencies	82
B105 Maintain tactical situation awareness	81

TABLE A2
WEAPONS DIRECTOR CLUSTER

TASKS	PERCENT MEMBERS PERFORMING (N=118)
B118 Perform authentication procedures	97
A9 Fire small arms for qualification	97
B105 Maintain tactical situation awareness	95
A19 Operate galley equipment, such as ovens or coffeemakers	95
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	94
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	94
A12 Inspect personal professional equipment	94
A6 Don or doff aircrew chemical warfare ensemble	94
C192 Hand off aircraft to other controlling agencies	93
B59 Assist in conducting search and rescue missions	93
A7 Don or doff aircrew protective clothing, such as antiexposure suits	93
B137 Review ATOs or ACOs	92
B58 Assist in conducting offensive missions	92
C174 Direct aircraft flow to assigned targets, tankers, or airspace	92
B97 Interpret ATOs or ACOs	92
C173 Direct aircraft to terminate missions or return to bases	92
C149 Accept control of aircraft from other control agencies	91
C163 Control aircraft at orbit points, such as strategic orbit points (STOPs), combat air patrol (CAP) points, or initial points (IPs)	91
C165 Deconflict aircraft with respect to routes, altitudes, or headings	90
C211 Request aircraft status information, such as fuel or fire control information	90
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	90
A8 Don or doff ground crew chemical warfare ensemble	90
C189 Evaluate mission compliance with rules of engagement	89
C161 Conduct search and rescue missions	89
C217 Transmit operational brevity codes	88
C213 Transmit airspace information to aircraft	88
B61 Break ATOs or ACOs	88
B57 Assist in conducting defensive missions	88
A10 Identify or dispose of foreign object damage (FOD)	88
B104 Maintain crew coordination	87
C155 Brief aircrews on special systems, threats, or procedures	87
B72 Conduct radio checks with ground or airborne agencies	87
A25 Participate in premission intelligence briefings	87
C160 Conduct offensive missions	86
A13 Instruct extra crewmembers or passengers on in-flight or ground emergency procedures	86

TABLE A3
AIR OPERATIONS JOB

TASKS	PERCENT MEMBERS PERFORMING (N=9)
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	100
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	100
A12 Inspect personal professional equipment	100
A6 Don or doff aircrew chemical warfare ensemble	100
A9 Fire small arms for qualification	100
A8 Don or doff ground crew chemical warfare ensemble	100
A42 Secure equipment for takeoffs or landings	89
A7 Don or doff aircrew protective clothing, such as antiexposure suits	89
A35 Pick up or turn in life support equipment	78
B104 Maintain crew coordination	78
B105 Maintain tactical situation awareness	78
B147 Update battle staff displays	78
A37 Preflight life support equipment	78
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	78
A10 Identify or dispose of foreign object damage (FOD)	78
A19 Operate galley equipment, such as ovens or coffeemakers	78
A21 Participate in combat survival training	78
B118 Perform authentication procedures	67
B111 Monitor ground station status	67
A34 Perform or practice emergency aircraft egress procedures	67
A36 Pick up or turn in support items, such as coffee or water jugs	67
A16 Open or close crew entrance doors	67
A32 Perform procedures in altitude chambers	56
B136 Respond to threat warnings	56
B137 Review ATOs or ACOs	56
B72 Conduct radio checks with ground or airborne agencies	56
A17 Operate emergency escape hatches	56
B86 Develop targets	44
B75 Configure console displays to depict operational information, such as coastlines, air bases, or training areas	44
E305 Pass immediate air request data	44

TABLE A4
COMMUNICATION TECHNICIAN JOB

TASKS	PERCENT MEMBERS PERFORMING (N=10)
E292 Encode or decode messages	100
B80 Coordinate operations with external agencies	100
E290 Determine or load cryptological key requirements	100
E317 Receive or maintain PLC encrypted EAMs	100
E314 Perform secure radio procedures	100
B82 Coordinate status of alerts or warnings, such as defense condition (DEFCON) status or weather alerts, with external agencies	100
E308 Perform communications checks	100
E296 Identify and report communications malfunctions	100
A41 Review and sign-off flight crew information files (FCIFs), mission operations read files (MORFs), or operations read files (ORFs)	100
A23 Participate in general or specialized mission briefings, other than intelligence or weather briefings	100
G353 Counsel subordinates concerning personal matters	100
E278 Complete emergency action slides for battle staff sections	100
E280 Conduct premission briefings	100
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	100
A6 Don or doff aircrew chemical warfare ensemble	100
E299 Monitor assigned communications nets	90
B85 Determine mission communications requirements	90
B49 Analyze mission information on schedules, status boards, or displays	90
G356 Determine or establish work assignments or priorities	90
E312 Perform radio/telephone (R/T) procedures	90
B104 Maintain crew coordination	90
E294 Evaluate possibility of authentication compromises	90
B135 Respond to status of alerts or warnings, such as DEFCON status or weather alerts	90
E295 Identify personnel with authority for directing encoding of regional air operations centers (RAOCs) or sector air operations centers (SAOCs) initiated EAMs	90
B147 Update battle staff displays	90
E274 Broadcast positive launch control (PLC) encrypted EAMs upon request	90
A37 Preflight life support equipment	90
A14 Load crew gear or personal equipment on aircraft	90
A42 Secure equipment for takeoffs or landings	90
I452 Destroy classified materials	90
A25 Participate in premission intelligence briefings	90
A12 Inspect personal professional equipment	90
E325 Report authentication compromises	90

TABLE A5
INSTRUCTOR JOB

TASKS	PERCENT MEMBERS PERFORMING (N=5)
H439 Inspect training materials or aids for operation or suitability	100
H431 Develop training materials or aids	100
H430 Develop performance tests	100
H446 Write test questions	100
H420 Administer or score tests	80
H424 Conduct formal course classroom training	80
H427 Counsel trainees on training progress	80
H438 Evaluate progress of trainees	80
H433 Establish or maintain study reference files	80
H429 Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSS)	80
H441 Personalize lesson plans	80
H440 Maintain training records or files	60
H423 Complete student entry or withdrawal forms	60
G350 Conduct safety inspections of equipment or facilities	60
G353 Counsel subordinates concerning personal matters	60
I449 Compile data for records, reports, logs, or trend analyses	60
H432 Develop training programs, plans, or procedures	60
A15 Maintain flight manuals, safety or operational supplements, or flight crew checklists	60
G400 Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	60
H428 Determine training requirements	60
H422 Brief organizational personnel concerning training programs or matters	40
I462 Maintain administrative files	40
G384 Evaluate personnel for compliance with performance standards	40
H434 Evaluate personnel to determine training needs	40
H447 Write training reports	40
G347 Conduct self-inspections or self-assessments	40

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